

UNIVERSITY OF LONDON.

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EXAMINATION

FOR

M A T R I C U L A T I O N

IN THE YEAR 1841.

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## EXHIBITIONERS.

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### MATHEMATICS AND NATURAL PHILOSOPHY.

1838. { CHARLES JAMES HARGREAVE ..... University College.  
C. SARGENT ..... King's College.
1839. ISAAC TODHUNTER ..... University College.
1840. WILLIAM DAVISON ..... University College.
1841. JOSEPH ANTHONY SPENCER ..... University College.

### CLASSICS.

1838. { FREDERICK JAMES MANNING ..... King's College.  
CHARLES PETER MASON ..... University College.
1839. { BARROW HELBERT ELLIS ..... University College.  
GEORGE DAVID JONES ..... King's College.  
JOHN PHILIP MARTINEAU ..... University College.
1840. TIMOTHY SMITH OSLER ..... Bristol College.
1841. BUNNELL LEWIS ..... University College.



# PASS EXAMINATION.

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MONDAY, October 4.—MORNING, 10 to 1.

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## ARITHMETIC AND ALGEBRA.

*Examiner, Mr. JERRARD.*

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1. WHAT is a decimal fraction? Show how to multiply, and to divide,  $6\cdot012$  by  $\cdot00345$ .

2. Find the simple interest of £3757 for  $5\frac{1}{2}$  years at  $3\frac{1}{2}$  per cent. per annum.

3. If seven oxen eat an acre of grass in six days, how long will it take seventeen oxen to eat thirty-four acres?

4. Extract the square root of 4498641, and that of  $\cdot04498641$ .

5. Multiply  $x + y$  by  $x - y$ , and give an interpretation of the result. Also expand

$$(x + y)^3, \text{ and } (1 + x)(1 - x - 3x^2 + 4x^3).$$

6. Compare the process of division in arithmetic with that in algebra. Divide

$x^4 - 10x^3 + 35x^2 - 50x + 24$  by  $x^2 - 5x + 4$ , and  
 $21x^3 + x^2y - 28x^2z - 53xyz - 10xy^2 + 22y^2z + 44yz^2$   
by  $7x^2 + 5xy - 11yz$ .

7. Show that if  $\frac{a}{b} = \frac{c}{d}$ , then  $\frac{a+b}{a-b} = \frac{c+d}{c-d}$ . Also show

that if  $a$  be less than  $b$ , the fraction  $\frac{a}{b}$  will be less than  $\frac{a+x}{b+x}$ , when  $x$  is any positive quantity.

8. Find the sum of  $n$  terms of the series

$$a + ar + ar^2 + ar^3 + \dots,$$

and insert eleven arithmetic means between 7 and 151.

9. Solve the equations

$$(1.) \quad 3 - (2x - 52) = 44 - x,$$

$$(2.) \quad \frac{x}{2} - \frac{x}{4} = 23 + \frac{x}{5} - \frac{x}{3},$$

$$(3.) \quad \frac{x+1}{2} - \frac{3x-1}{7} = \frac{7x-11}{4},$$

$$(4.) \quad \left. \begin{array}{l} 10x + 14y = 19 \\ 102x - 66y = 29 \end{array} \right\}.$$

What is the meaning of such equations as

$$(5.) \quad 59 + x = 25,$$

$$(6.) \quad \frac{2}{x^2 - 1} = \frac{1}{x - 1} - \frac{1}{x + 1}?$$

10. A hare fifty leaps in advance of a greyhound, and taking three leaps for every two of the latter, is overtaken in 300 leaps of the greyhound: what is the proportion between the lengths of the leaps?

11. Every whole number may be reduced to the form

$$a_n r^n + a_{n-1} r^{n-1} + a_{n-2} r^{n-2} + \dots + a_1 r^1 + a_0,$$

in which  $r$  may be any integer whatever, and  $a_n, a_{n-1}, \dots, a_0$  are integers, including zero, less than  $r$ .

MONDAY, October 4.—AFTERNOON, 3 to 6.

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## ENGLISH HISTORY.

*Examiner*, Rev. Dr. JERRARD.

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1. What are the earliest notices of Britain which occur in Greek authors? By whom was this island first peopled? On what pretence was it invaded by Julius Cæsar? How long did the Romans remain masters of the greater part of it? About what time was Christianity first introduced into it?

2. Give some account of the Anglo-Saxon form of government. How do you account for the despotic nature of the government of the Anglo-Norman kings?

3. "The great Charter had laid the foundation of this valuable part of liberty (security from arbitrary imprisonment); the petition of right had renewed and extended it; but some provisions were still wanting to render it complete."—*Hume*. By what act, and in what year, was this important object fully effected? Explain the principal provisions of the Magna Charta, and of the Petition of Right.

4. What was the origin of the wars between the Houses of York and Lancaster? How long did they continue, and with what event did they terminate? Give some idea of the sufferings they brought upon the English people. What effect had they upon the prerogative of the Crown?

5. Give some account of the state of Commerce in England during the reigns of the Anglo-Norman kings. How do you account for its great extension in the reign of Henry VII.; and for its depressed condition in that of Mary? What caused it greatly to increase after the Restoration? To which

of the kings has the title of Father of English Commerce been applied, and for what reason? When was the East India Company established?

6. On what occasion did Henry VIII. obtain the title of Defender of the Faith? What inducements had he, at a later period of his life, to break off his connexion with the Court of Rome? What circumstances led to his final breach with the Pope? How may his hatred of the Protestants be accounted for? By what enactments did the Parliament add to the great authority already possessed by him? What was his pretext for suppressing the Monasteries? How were the revenues of those Institutions disposed of by him? What were his motives for procuring the trial and execution of Sir Thomas More? Give the character of that remarkable man.

7. Give a sketch of the principal events which took place in the reign of Edward VI.

8. When and by whom was the practice of Toleration introduced into England? By what eminent Minister of Mary were the rights of Conscience advocated, though without success? Give a sketch of the arguments employed by him. Give a short account of the persecutions, for religious opinions, which took place in the reign of Mary; and also in that of Elizabeth.

9. What peculiar difficulties had Mary Queen of Scots to encounter at the commencement of her reign? How do you account for the popularity which she gradually acquired; and for the sudden change which afterwards took place in the sentiments of her subjects towards her? On what pretext was she detained a prisoner in England by Elizabeth? On what grounds was she subsequently brought to trial and executed?

10. What was the state of France and of the Netherlands during the reign of Elizabeth? How far did she take part in the affairs of these Countries? By what motives does Philip of Spain appear to have been instigated in his attempt to crush the power of England? Give a short description of the Armada; of the preparations made by the English to resist it; and of the way in which it was defeated.



What symptoms of an independent spirit were evinced by the Parliament in this reign; and how were they repressed?

11. Can the execution of Charles I. be regarded as the act of the majority of the people of England? State your reasons in support of your opinion. In what light was this act regarded by the nations of Europe generally?

12. When was Cromwell appointed Protector? What was the nature of his domestic administration? Give the character of Barebone's Parliament. What was their opinion of Learning and Universities—also of the Common Law? Was the liberty of the press in any degree promoted during the period of the Commonwealth? When were the restraints upon the press removed?

13. By what proceedings did James II. disgust the great body of his English subjects? What was the immediate occasion of his flight?

14. What arguments were used in Parliament in favour of appointing the Prince of Orange Regent? What, in favour of appointing him King? What was the *foundation* of the reasonings of the Whigs in support of the latter plan? State the provisions of the Act of Settlement.

TUESDAY, October 5.—MORNING, 10 to 1.

## GREEK CLASSIC AND HISTORY.

Examiner, Rev. Dr. JERRARD.

### XENOPHON\*, CYROPLEDIA, Book I.

(A.) "Ὅτε μὲν δὴ ταῦτα ἐνεθυμούμεθα, οὕτως ἐγινώσκομεν περὶ αὐτῶν, ὡς ἀνθρώπων πεφυκότι πάντων τῶν ἄλλων ζώων εἶη ῥᾶον, ἢ ἀνθρώπων, ἄρχειν. Ἐπειδὴ δὲ ἐνενοήσαμεν, ὅτι Κῦρος ἐγένετο Πέρσης, ὃς παμπόλλους μὲν ἀνθρώπους ἐκτίησας περὶ τοῦτον δὴ ἡναγκαζόμεθα μετανοεῖν, μὴ οὔτε τῶν ἀδυνάτων οὔτε τῶν χαλεπῶν ἔργων εἶναι τὸ ἀνθρώπων ἄρχειν, ἣν τις ἐπισταμένως τοῦτο πράττη. Κύρῳ γοῦν ἴσμεν ἐβελήσαντας πείθεσθαι, τοὺς μὲν ἀπέχοντας παμπόλλων ἡμερῶν ὁδόν, τοὺς δὲ καὶ μηνῶν, τοὺς δὲ οὐδ' ἐωρακότας πώποτε αὐτόν, τοὺς δὲ καὶ εὖ εἰδότας, ὅτι οὐδ' ἂν ἴδοιεν καὶ ὅμως ἠθέλον αὐτῷ ὑπακούειν. Καὶ γάρ τοι τοσοῦτον διήνεγκε τῶν ἄλλων βασιλέων, καὶ τῶν πατρίους ἀρχαῖς παρειληφότων, καὶ τῶν δι' ἑαυτῶν κτησαμένων, ὥστε ὁ μὲν Σκύθης, καίπερ παμπόλλων ὄντων Σκυθῶν, ἄλλου μὲν οὐδενὸς δύναιτ' ἂν ἔθνους ἐπάρξαι, ἀγαπῶν δ' ἂν, εἰ τοῦ ἑαυτοῦ ἔθνους ἀρχῶν διαγένοιτο· καὶ ὁ Θρᾶξ Θρακῶν, καὶ ὁ Ἰλλυριὸς Ἰλλυριῶν καὶ τᾶλλα δὲ ὡσαύτως ἔθνη ἀκούομεν· τὰ γοῦν ἐν τῇ Εὐρώπῃ ἔτι καὶ νῦν αὐτόνομα εἶναι λέγεται, καὶ λελίσθαι ἀπ' ἀλλήλων· Κῦρος δὲ, παραλαβὼν ὡσαύτως οὕτω καὶ τὰ ἐν τῇ Ἀσίᾳ ἔθνη αὐτόνομα ὄντα, ὕρμηθεις σὺν ὀλίγῃ Περσῶν στρατιᾷ, ἐκόντων μὲν ἡγήσατο Μήδων, ἐκόντων δὲ Ὑρκανίων· κατεστρέψατο δὲ Σύρους, Ἀσσυρίους, Ἀραβας, Καππαδόκας, Φρύγας ἀμφοτέρους, Λυδοὺς, Κᾶρας, Φοίνικας, Βαβυλωνίους· ἤρξε δὲ καὶ Βακτρίων καὶ Ἰνδῶν, καὶ Κιλικῶν· ὡσαύτως δὲ Σακῶν καὶ Παφλαγόνων, καὶ Μαριανδυνῶν, καὶ ἄλλων δὲ παμπόλλων ἐθνῶν, ὧν οὐδ' ἂν τὰ ὀνόματα ἔχοι τις

\* Edit. Dindorf.

εἰπεῖν. Ἐπῆρξε δὲ καὶ Ἑλλήνων τῶν ἐν τῇ Ἀσίᾳ, καταβὰς δὲ ἐπὶ θάλατταν, καὶ Κυπρίων καὶ Αἰγυπτίων.

(B.) Πλέον δ' ἔχειν, ὦ πάτερ, πολεμίων πῶς ἂν τις δύναίτο μάλιστα; Οὐ μὰ Δί', ἔφη, οὐκέτι τοῦτο φαῦλον, ὦ παῖ, οὐδ' ἀπλοῦν ἔργον ἐρωτᾷς· ἀλλ' εὖ ἴσθι, ὅτι δεῖ τὸν μέλλοντα τοῦτο ποιήσῃν, καὶ ἐπίβουλον εἶναι, καὶ κρυψίνουν, καὶ δολερὸν, καὶ ἀπατεῶνα, καὶ κλέπτην, καὶ ἄρπαγα, καὶ ἐν παντὶ πλεονέκτην τῶν πολεμίων. Καὶ ὁ Κῦρος ἐπιγελάσας εἶπεν, ὦ Ἡράκλεις, οἶον σὺ λέγεις, ὦ πάτερ, δεῖν ἄνδρα με γενέσθαι. Οἷος ἂν, ἔφη, ὦ παῖ, δικαιοτάτος τε καὶ νομιμώτατος ἀνὴρ εἴης. Πῶς μὲν, ἔφη, παῖδας ὄντας ἡμᾶς καὶ ἐφήβους τάναντία τούτων ἐδιδάσκετε; Ναὶ μὰ Δί', ἔφη, καὶ νῦν γε, πρὸς τοὺς φίλους τε καὶ πρὸς τοὺς πολίτας· ὅπως δέ γε τοὺς πολεμίους δύναισθε κακῶς ποιεῖν, οὐκ οἶσθα μανθάνοντας ὑμᾶς πολλὰς κακουργίας; Οὐ δῆτ' ἔγωγ', ἔφη, ὦ πάτερ.

(C.) Εἰ δὲ σύ γε, ἔφη, ὦ παῖ, μηδὲν ἄλλο ἢ μετενέγκοις ἐπ' ἀνθρώπους τὰς μηχανὰς, ἃς καὶ ἐπὶ τοῖς πάνυ μικροῖς θηρίοις ἐμχανῶ, οὐκ οἶει ἂν, ἔφη, πρόσω πάνυ ἐλάσαι τῆς πρὸς τοὺς πολεμίους πλεονεξίας; Σὺ μὲν γὰρ ἐπὶ τὰς ὀρνιθας ἐν τῷ ἰσχυροτάτῳ χειμῶνι ἀνιστάμενος, ἐπορεύου νυκτός· καὶ πρὶν κινεῖσθαι τὰς ὀρνιθας ἐπεπήγηντό σοι ἐπὶ τούτῳ αἱ πάγαι αὐταῖς, καὶ τὸ κεκινημένον χωρίον ἐξείκαστο τῷ ἀκινήτῳ. ὀρνιθες δὲ ἐπεπαίδευντό σοι, ὥστε σοὶ μὲν τὰ συμφέροντα ὑπηρετεῖν, τὰς δὲ ὁμοφύλους ὀρνιθας ἐξαπατᾶν· αὐτὸς δὲ ἐνῆδρευες, ὥστε ὀρᾶν μὲν αὐτάς, μὴ ὀρᾶσθαι δὲ ὑπ' αὐτῶν· ἡσκήσεις δὲ φθάνειν ἑλκων, ἢ τὰ πτηνὰ φυγεῖν. Πρὸς δ' αὖ τὸν λαγῶν, ὅτι μὲν ἐν σκότει νέμεται, τὴν δ' ἡμέραν ἀποδιδράσκει, κύνας ἔτρεφες, αἱ τῇ ὁσμῇ αὐτὸν ἀνεύρισκον. Ὅτι δὲ ταχὺ ἔφευγεν, ἐπεὶ εὐρεθείη, ἄλλας κύνας εἶχες ἐπιτετηδευμένας πρὸς τὸ κατὰ πόδας αἰρεῖν. Εἰ δὲ καὶ ταύτας ἀποφύγοι, τοὺς πόρους αὐτῶν ἐκμανθάνων, καὶ πρὸς οἷα χωρία φεύγειν αἰροῦνται οἱ λαγῶν ἐν τούτοις τὰ δίκτυα δυσόρατα ἐνεπετάννυες, ἵνα ἐν τῷ σφόδρα φεύγειν αὐτὸς ἑαυτὸν ἐμπίπτων ἐνέδῃ. Τοῦ δὲ μηδ' ἐντεῦθεν διαφεύγειν, σκοποὺς τοῦ γιγνομένου καθίστης, οἱ ἐγγύθεν ταχὺ ἑμῆλλον ἐπιγενήσεσθαι· καὶ αὐτὸς μὲν σὺ ὅπισθεν κραυγῇ οὐδὲν ὑστεριζούσῃ τοῦ λαγῶ βοῶν, ἐξέπληττες αὐτὸν, ὥστε ἀφρόνως ἀλίσκεσθαι· τοὺς δὲ ἐμπροσθεν σιγῇ διδάξας ἐνεδρεύοντας, λανθάνειν ἐποίεις.

"Ὡςπερ οὖν προεῖπον, εἰ τοιαῦτα ἐθέλῃσαι καὶ ἐπὶ τοὺς ἀνθρώπους μηχανᾶσθαι, οὐκ οἶδ' ἔγωγε, εἴ τινα λίποις ἂν τῶν πολέμων.

1. Translate the following passage and correct the errors in it; stating the reason for each change:

Ἐν δὲ τούτῳ με ἔπαισεν ὁ διδάσκαλος, λέγων, ὅτι, ὁπότε μὲν κατασταθείην τοῦ ἀρμόττοντος κριτῆς, οὕτω δεῖ ποιεῖν ὁπότε δὲ κρίναι δέοι, ὁποτέρου ὁ χιτῶν ἐστὶ, τοῦτ' ἔφη σκεπτέον εἶναι, τίς κτῆσις δικαία ἐστί· πότερα τὸν βία ἀφελόμενον ἔχειν, ἢ τὸν ποιησάμενον ἢ πριάμενον κεκτῆσθαι.

2. What objects does Xenophon appear to have had in view in composing the *Cyropædia*? Translate what Cicero says of this work, that it is written "*non ad historię fidem sed ad effigiem justı imperii.*" Does this description remind you of any celebrated modern work? In what material points is Xenophon's narrative at variance with what we learn of Cyrus from other sources? Who were Cyrus's successors on the throne; and how long did the Persian Empire last?

3. Give a sketch of Xenophon's life; and mention the principal events which took place at Athens in his time. What English writers appear to you most to resemble him in the peculiar excellences of his style? Point out the advantages and disadvantages of the system of education which he describes as existing among the Persians.

4. Explain the constructions—*πρόσω ἐλάσαι τῆς πλεονεξίας—ἡσκήσεις φθάνειν ἔλκων, κ.τ.λ. ἵνα... ἐνέδν—Οἷος ἂν εἴης—ὥς ἀνθρώπῳ πεφυκότι.* What is the force of *ἂν* after *ἐνεπετάννυες*? Why are optatives used with *εἰ* and *ἂν* in the last sentence of (C.) extract?

5. *Οἶσθα μανθάνοντας.* What classes of verbs are followed, in Greek, by the participle instead of the infinitive? Is this construction ever imitated by Latin authors?

6. What is the exact force of the particle *μὲν*? Is the shade of meaning which it expresses *ever* correctly denoted in English by such words as "indeed" or "truly"? What are the precise meanings of *δὲ*, *δήπου*, *δήτα*, *γε*, *γούν*, and *τοι*?

7. Draw a map including the countries mentioned in the extract (A.) as having been conquered by Cyrus.

TUESDAY, October 5.—AFTERNOON, 3 to 6.

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CHEMISTRY. NATURAL HISTORY.

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CHEMISTRY.

*Examiner*, Professor DANIELL.

1. What are the Chemical Elements which may be derived from the Atmosphere? In what state, and in what proportions, do they enter into its Constitution?

2. How is Chemical Affinity distinguished from other forces which act upon matter? and what are the Laws of Chemical Composition? Illustrate them by examples.

3. What is Fire? What becomes of a body which is burnt?

4. What is meant by a degree of temperature upon Fahrenheit's scale?

5. What are the principal characteristic properties of the Metals? Mention the equivalents of any six upon the hydrogen-scale, and the equivalents of their oxides.

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BOTANY.

*Examiner*, Professor HENSLOW.

CHARACTERS OF THE PRINCIPAL NATURAL FAMILIES OF EUROPEAN PLANTS.

State the principal characters of

1. Cruciferæ.
2. Rhamnaceæ.
3. Alismaceæ.



Give the chief points of resemblance and difference in

4. Primulacæ and Gentianacæ.

5. Rosacæ and Saxifragacæ.

To what Orders do you refer plants possessing the following characters?

6. *Flos* hermaphroditus, irregularis.

*Calyx* monosepalus, inferior.

*Corolla* monopetala, hypogyna, bilabiata.

*Stamina* didynama.

*Ovarium* 4-partitum, ex carpellis binis 2-partitis constans, loculis uniovulatis.

*Stylus* filiformis centralis.

*Stigma* bifidum.

*Fructus*: nuccæ quatuor, calyce persistente inclusæ.

7. *Flores* unisexuales spadici inserti, spathâ inclusi.

*Perianthium* nullum.

*Stamina* indefinita.

*Ovarium* superius, uniloculatum, multiovulatum.

*Fructus* succulentus.

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## ZOOLOGY.

*Examiner*, Dr. ROGET.

1. Enumerate the principal Varieties of the Human Race; and describe the characteristic features of each.

2. By what characters are venomous Serpents distinguished from those which are innocuous?

3. Specify the genera of Vertebrate Animals which are furnished with sucking discs; and explain the physical principles on which the action of those organs depends.

4. Give the Latin generic and specific names of the under-mentioned animals; specify the Class, Order, and Natural

Family of each in the system of Cuvier; and describe some of the leading particulars of their natural history.

Spermaeeti Whale.	Flying Opossum.
Great Anteater.	Siren.
Lamprey.	Common Badger.
Common Bat.	Tapir.
Cassowary.	Great Water Newt.

5. By what general character are Turbinated Shells appertaining to Carnivorous Mollusea distinguished from those which appertain to Herbivorous Mollusea?

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WEDNESDAY, October 6.—MORNING, 10 to 1.

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## GEOMETRY AND SIMPLE EQUATIONS.

*Examiner,* Rev. R. MURPHY.

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1. When two triangles have two sides of the one respectively equal to two sides of the other, and the included angles also equal to each other, the third or remaining sides shall also be equal, and the angles, viz. those opposite to equal sides, shall also be equal, and the whole triangles shall be equal one to the other.

2. To bisect a given retilineal angle.

3. Prove that any side of a triangle is less than the sum of the other two, and that any side of a quadrilateral is less than the sum of the other three sides. Extend a similar law to multi-sided retilineal figures in general.

4. When a straight line falling on two other straight lines makes the external angle equal to the internal and opposite angle, these two straight lines are parallel.

5. Straight lines, parallel to the same straight line, are parallel to each other.

6. The square described on that side of a right-angled triangle, which is opposed to the right angle, is equal to the sum of the squares described on the sides which contain it.

7. *Problem*.—Bisect a triangle by a straight line drawn through a given point in one of its sides.

8. Solve the following simple equations :

$$(1.) \quad \frac{3x}{16} - 99\frac{3}{4} = 0.$$

$$(2.) \quad \frac{x}{5} + \frac{x}{6} - \frac{x}{3} = 1 + \frac{x}{2} - \frac{x}{8} - \frac{x}{10} - \frac{x}{4}.$$

$$(3.) \quad \frac{187 + x}{x - 37} = \frac{3x - 9}{3x - 121}.$$

$$(4.) \quad \frac{x}{a} + \frac{x + b}{a + b} + \frac{x + c}{a + c} = 3.$$

$$(5.) \quad \begin{cases} x + y = s. \\ x - y = d. \end{cases}$$

$$(6.) \quad \begin{cases} 3x + 5y = 370. \\ 5x + 3y = 590. \end{cases}$$

9. *Problem*.—Ten years since, the ages of A and B together exceeded four times C's age by six years, but in ten years hence that sum will only exceed three times C's age by three years; when C was born A was exactly three times the age of B,—what are their present ages?



WEDNESDAY, October 6.—AFTERNOON, 3 to 6.

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## NATURAL PHILOSOPHY.

*Examiners*, Mr. JERRARD and Rev. R. MURPHY.

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1. Explain the composition of two forces acting upon a point, and illustrate your result by ordinary examples.
2. Mention the simple machines, and state the ratio of the power to the weight in the screw.
3. Define the centre of gravity.
4. How may the true weight of a body be ascertained by weighing it in each scale of a false balance the arms of which are unequal in length?
5. Define velocity, and show that the construction for the composition of forces also applies to that of velocities.
6. State the General Laws of Motion, and describe the chief experiments by which they may be illustrated.
7. Explain the action of the Siphon, and the construction of the Air-pump.
8. Give an explanation of the relation between the pressure of fluids and the depth, mentioning some of the important applications of the principle.
9. How is sound propagated? What is its velocity in air? How is the velocity affected by temperature? Explain the production of echoes.
10. What are the laws of the Reflection and Refraction of a ray of light?

*FRIDAY, October 8.—MORNING, 10 to 1.*

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ROMAN CLASSIC AND HISTORY.

*Examiner, Mr. BURCHAM.*

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VIRGIL\*, GEORGICS, Book I.

Translate :

- (A.) Quid dicam, jacto qui semine comminus arva  
 Insequitur, cumulosque ruit male pinguis arenæ?  
 Deinde satis fluvium inducit rivosque sequentis?  
 Et, quum exustus ager morientibus æstuat herbis,  
 Ecce supercilio clivosi tramitis undam  
 Elicit? illa cadens raucum per levia murmur  
 Saxa ciet, scatebrisque arentia temperat arva.  
 Quid, qui, ne gravidis procumbat culmus aristis,  
 Luxuriam segetum tenera depascit in herba,  
 Quum primum sulcos æquant sata? quique paludis  
 Conlectum humorem bibula deducit arena?  
 Præsertim incertis si mensibus amnis abundans  
 Exit, et obducto late tenet omnia limo:  
 Unde cavæ tepido sudant humore lacunæ.
- (B.) Ille malum virus serpentibus addidit atris,  
 Prædarique lupos jussit, pontumque moveri;  
 Mellaque decussit foliis, ignemque removit,  
 Et passim rivis currentia vina repressit:  
 Ut varias usus meditando extunderet artis  
 Paullatim, et sulcis frumenti quæreretur herbam;  
 Ut silicis venis abstrusum excuderetur ignem.  
 Tunc alnos primum fluvii sensere cavatas;  
 Navita tum stellis numeros et nomina fecit,  
 Pleiadas, Hyadas, claramque Lycaonis Arcton.

\* Edit. Heyne.

Tum laqueis captare feras, et fallere visco,  
 Inventum, et magnos canibus circumdare saltus.  
 Atque alius latum funda jam verberat amnem;  
 Alta petens pelagoque alius trahit humida lina.  
 Tum ferri rigor, atque argutæ lamina serræ,  
 (Nam primi cuneis scindebant fissile lignum)  
 Tum variæ venere artes: labor omnia vicit  
 Inprobus et duris urguens in rebus egestas.  
 Prima Ceres ferro mortalis vertere terram  
 Instituit: quum jam glandes atque arbuta sacræ  
 Deficerent silvæ, et victum Dodona negaret.  
 Mox et frumentis labor additus: ut mala culmos  
 Esset robigo, segnisque horreret in arvis  
 Carduus: intereunt segetes; subit aspera silva,  
 Lappæque tribulique; interque nitentia culta  
 Infelix lolium et steriles dominantur avenæ.

- (C.) Nec frustra signorum obitus speculamur et ortus,  
 Temporibusque parem diversis quatuor annum.  
 Frigidus agricolam si quando continet imber:  
 Multa, forent quæ mox cœlo properanda sereno,  
 Maturare datur; durum procudit arator  
 Vomeris obtusi dentem; cavat arbore lintres;  
 Aut pecori signum aut numeros inpressit acervis.  
 Exacuunt alii vallos furcasque bicornis,  
 Atque Amerina parant lentæ retinacula viti.  
 Nunc facilis rubea texatur fiscina virga;  
 Nunc torrete igni fruges, nunc frangite saxo.  
 Quippe etiam festis quædam exercere diebus  
 Fas et jura sinunt: rivos deducere nulla  
 Religio vetuit, segeti prætere seepem,  
 Insidias avibus moliri, incendere vepres,  
 Balantumque gregem fluvio mersare salubri.  
 Sæpe olco tardi costas agitator aselli  
 Vilibus aut onerat pomis; lapidemque revertens  
 Incusum, aut atræ massam picis, urbe reportat.

- (D.) Quoties Cyclopum effervere in agros  
 Vidimus undantem ruptis fornacibus Ætnam,

Flammarumque globos liquefactaque volvere saxa!  
 Armorum sonitum toto Germania cœlo  
 Audiit; insolitis tremucrunt motibus Alpes.  
 Vox quoque per lucos volgo exaudita silentis  
 Ingens; et simulacra modis pallentia miris  
 Visa sub obscurum noctis; pecudesque loquutæ;  
 Infandum! sistunt amnes, terræque dehiscunt.  
 Et mæstum inlæcrimat templis ebur, æraque sudant.  
 Proluit insano contorquens vertice silvas  
 Fluviorum rex Eridanus, camposque per omnis  
 Cum stabulis armenta tulit. Nec tempore eodem  
 Tristibus aut extis fibræ adparere minaces,  
 Aut putcis manare cruor cessavit; et altæ  
 Per noctem resonare, lupis ululantibus, urbes.  
 Non alias cœlo ecciderunt plura sereno  
 Fulgura; nec diri toties arsere cometæ.  
 Ergo inter sese paribus concurrere telis  
 Romanas acies iterum videre Philippi;  
 Nec fuit indignum superis, bis sanguine nostro  
 Emathiam et latos Hæmi pinguescere campos.

1. Explain the expression 'quadrigæ addunt in spatia,' and illustrate the historical allusions in the latter part of this Georgic. Where are Mænala, Gargara, Ameria, Athos, Asia prata, Cayster, respectively situated?

2. By whom were the lands cultivated in the earlier and later periods of the Roman Republic? How many acres were granted to each citizen after the expulsion of the Kings?

'Nec *fortuitum* spernere cespitem  
 Leges sinebant.' Hor. Od. II. 15.

What is the exact meaning of *fortuitum* in this passage? Who were the Partiarîi, and to whom in modern times do they bear a resemblance?

3. Mention the various kinds of grain and pulse, which were chiefly cultivated by the Romans. What were the machines designated by the terms *trahea*, *tribula*, *ventilabrum*, *vannus*? What is the difference between *palea* and *stramen*?

4. What period elapsed between the foundation of Rome,

and the expulsion of the Kings? Point out such portions of the account of that period as you may conceive to be mythical, historical, or of a mixed character.

5. Of how many did the Senate originally consist? What was its number in the time of Sulla? Who were the ‘*Patres Minorum Gentium*’ and the ‘*Patres Majorum Gentium*’? What is the meaning of ‘*Patres Conscripti*’?

6. About what time do the *Equites* seem to have been reckoned a distinct order? From whom were they chosen? What was the property qualification required of them towards the end of the Republic, and under the Emperors?

7. What was the constitution of Carthage? By what Greek writer is it commended? From what body were the chief officers of the state selected? Who were the *Suffetes*? Upon what occasions were the decisions of the people conclusive?

8. Who was Agathocles, and about what time did he flourish? Mention the circumstances which led to the invasion of Sicily by the Romans. What were its consequences? By whom was Regulus defeated? How are the Carthaginians said to have rewarded the victorious General?

9. Mention the rogations proposed (U. C. 378.) by C. Licinius Stolo. In what way were their provisions violated by the Nobles? What laws may be considered as the revival of them? What arguments against or in favour of those laws were urged by the Patrician and Plebeian classes?



FRIDAY, October 8.—AFTERNOON, 3 to 6.

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## GRAMMATICAL STRUCTURE OF THE ENGLISH LANGUAGE.

*Examiner, Mr. BURCHAM.*

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1. Give a definition of Language. Point out the difference between the form of the English and of the Greek and Latin languages, as regards the mode of expressing relations. Show that the first is more limited than the other two as to the power of varying the order of its words.

2. Mention the principal languages which belong to the Indo-European and Semitic families respectively. Of what dialects does the Anglo-Saxon appear to have been originally composed? During what period was it the common language of England? Give a short account of the formation of the English language.

3. How is the affinity of any class of languages ascertained? Mention the class of words in which a similarity would indicate a common origin. Give instances of words of this class, which have a general resemblance in Greek, Latin, and English.

4. What is meant by *notional* and *relational* words? What is the law in reference to the increase or diminution of the latter in a language in proportion to its powers of inflection? Mention the terminations in the English language which generally give to the root the notion of smallness, and give instances.

5. Give the exact meaning of the term *adjective*. How do you defend such expressions as, 'He walks quick,' 'He talks loud,' 'He breathes short,' &c.? How are adjectives, which

are not simple roots, formed in the English language? Give a list of adjectives so formed which belong to the Saxon part of our language, and of others, which have a Latin and Greek origin.

6. Of what is the indefinite article ‘An’ a corruption? From what does Horne Tooke derive the definite article? Show that it is a corrupted demonstrative pronoun. Why may the relative be termed a *postpositive* article? Mention any phrases in our language which show the alliance of the definite article with the Greek *τό*.

7. ‘A conjunction is a word which connects sentences together.’ Show that this definition will not apply in all cases. What explanation does Horne Tooke give of the conjunction *that*? Confirm his theory by instancing similar usages of the corresponding conjunctions in Greek and Latin.

8. Distinguish between *sex* and *gender*. How do you account for the fact that the terms signifying ‘child,’ ‘lamb,’ ‘foal,’ &c. in the greater part of the Teutonic languages are of the neuter gender? What does the termination ‘er’ imply? Why is ‘spinster’ applied only to females? Of what is ‘laundress’ an abbreviation?

9. In what respects are the following sentences faulty? “All words which are signs of complex ideas furnish matter of mistake.” “It is the practice of judges to direct juries to decide against incorporeal rights, which for many years have been relinquished.” “This accounts for Demosthenes charging Æschines with mal-versation.” “By greatness is not only meant the bulk of any single object, but the largeness of a whole view.” “Theism can only be opposed to polytheism or atheism.” “It was impossible not to suspect the veracity of this story.” “All the sophism he used was of no avail.” “They had no other subsistence, but the scanty pillage of a few farms.”

10. Distinguish between riches, richness—justice, justness—acceptance, acceptation—negligence, neglect—quantity, number—policy, polity. Give sentences in which any one of these expressions is used improperly for the other. Correct the following sentences, giving reasons for your cor-

rections :—"The servant has an undeniable character." "This undertaking is inadequate to your ability." "No man had ever less friends, and more enemies." "Polynices and Eteocles killed one another." "Of all vices pride is the most universal."

When may the expressions 'more inferior' 'more preferable' be used?



EXAMINATION. FOR HONOURS.



# EXAMINATION FOR HONOURS.

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## MATHEMATICS AND NATURAL PHILOSOPHY.

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TUESDAY, October 12.—MORNING, 10 to 1.

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### ARITHMETIC, ALGEBRA, GEOMETRY.

*Examiner,* REV. R. MURPHY.

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1. FIND a fourth proportional to the numbers  $365\frac{1}{4}$ ,  $52\frac{1}{7}$ , 13, and a mean proportional to the numbers 289 and 950625.

2. Sum the fractions  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{7}$ ,  $\frac{1}{8}$ ,  $\frac{1}{9}$ ,  $\frac{1}{10}$ . Convert  $\frac{355}{113}$  into a decimal form, and extract the square root of 3·14159.

3. When money brings  $3\frac{1}{2}$  per cent. interest, what present advance would be an equivalent to £2500 payable two years hence?

4. From the fraction  $\frac{\frac{11}{3} + 20x + 20x^2}{1 + 12x + 30x^2 + 20x^3}$  subtract

$\frac{3 + 6x}{1 + 6x + 6x^2}$ , and convert the former into a series arranged according to the descending powers of  $x$ .

5. Explain the principle of the method for completing the square in the formula  $ax^2 + bx$ , and find the relations between the coefficients necessary that the formula

$$x^4 + ax^3 + bx^2 + cx + d$$

may be, *per se*, a complete square.

6. Find the number of combinations of  $n$  things taken  $m$  and  $m$  together, and the total number of *even* combinations of the same.

7. Solve the equations

$$(1.) \quad x^4 - 11x^2 = 26702.$$

$$(2.) \quad \sqrt{x^2 + 44} + \sqrt{x^2 + 6x + 9} = 25.$$

$$(3.) \quad 1 + x + x^2 + x^3 = 0.$$

$$(4.) \quad \begin{cases} x + y + z = 12. \\ x^2 + y^2 + z^2 = 56. \\ x + z = 2y. \end{cases}$$

8. Arcs of equal circles are in the same ratio as the angles at the centre which they subtend.

9. Give Euclid's demonstration that circles are to each other as the squares of their diameters.

10. Show how to construct a square which shall be equal to a given rectilincal figure.

TUESDAY, October 12.—AFTERNOON, 3 to 6.

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## PLANE AND SPHERICAL TRIGONOMETRY— CONIC SECTIONS.

*Examiner, Mr. JERRARD.*

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1. Give some account of the most approved method of constructing trigonometric tables.

2. Show that

$$\begin{aligned} &(\cos A + \sqrt{-1} \sin A) (\cos B + \sqrt{-1} \sin B) \times \\ &(\cos C + \sqrt{-1} \sin C) \dots = \cos (A + B + C + \dots) \\ &+ \sqrt{-1} \sin (A + B + C + \dots) \end{aligned}$$

3. Of any plane triangle of which two sides and the included angle are given, find the other two angles and the third side.

4. The surface of a spherical triangle is measured by the excess of the sum of its three angles above two right angles.

5. Investigate the relations

$$\tan \frac{1}{2} (A + B) = \cot \frac{1}{2} C \frac{\cos \frac{1}{2} (a - b)}{\cos \frac{1}{2} (a + b)},$$

$$\tan \frac{1}{2} (A - B) = \cot \frac{1}{2} C \frac{\sin \frac{1}{2} (a - b)}{\sin \frac{1}{2} (a + b)}.$$

6. Determine the expression for the distance of a point from a line of which the equation is given.

7. Show that in the parabola referred to any diameter and the tangent at its extremity, as axes, the square of the ordinate varies as the corresponding abscissa.

8. The normal at any point in the ellipse bisects the angle formed by the lines drawn from that point to the foci.

9. Assuming the equation of the hyperbola referred to its

axes, determine, by means of the transformation of coordinates, the equation referred to its asymptotes.

10. Give an outline of the method of discussing, by the separation of the variables, the general equation of curves of the second degree

$$A y^2 + B x y + C x^2 + D y + E x + F = 0.$$

WEDNESDAY, October 13.—MORNING, 10 to 1.

## HYDROSTATICS AND OPTICS.

*Examiner*, REV. R. MURPHY.

1. Define specific gravity, and having given the specific gravities of two uniform fluids, find that of their mixture, supposing that no alteration in volume takes place.

2. The pressure of a heavy uniform fluid at rest is proportional to the depth from the surface, which surface is necessarily horizontal. Prove these propositions.

3. The horizontal pressures of a fluid against the sides of the containing vessel, or of an immersed solid, mutually destroy each other.

4. Describe the Archimedean screw as applied to the raising of water from wells, &c.; state another use to which it has recently been applied.

5. Find the density of the air remaining in a cylinder after the air-pump has been worked a certain number of times.

6. Find the deviation of a ray of light reflected between two plane mirrors inclined to each other at a given angle.

7. Find the number and position of the images of a point placed between two inclined mirrors.

8. The image of a straight line formed by a spherical reflector is a conic section.

9. Trace the path of a ray of light passing through parallel media of different densities; and also that of a ray passing through a prism.

10. Give an account of the formation of the primary and secondary rainbows.

11. Describe the Gregorian telescope, and find its magnifying power.

WEDNESDAY, October 13.—AFTERNOON, 3 to 6.

## STATICS AND DYNAMICS.

*Examiner, Mr. JERRARD.*

1. Give an account of the different systems of pulleys, and investigate the conditions of equilibrium.

2. Determine the position of the centre of gravity of a triangular pyramid.

3. Find the resultant of any number of forces acting in any directions on a point; also express it in a form which shall contain only these forces and the angles between their directions.

4. Determine the coordinates of the centre of any number of parallel forces.

5. Show that the space described by a body, acted on by a uniform force from a state of rest, varies as the square of the time.

6. Explain Attwood's machine for illustrating the laws which regulate the descent of heavy bodies.

7. How long would a body be in falling down an inclined plane the length of which is 170 feet, and the inclination to the horizon  $18^\circ$ ?

8. Find the range of a projectile on a horizontal line passing through the point of projection, and determine the time of flight. Also solve the problem when the line is not horizontal.

9. Two elastic bodies moving with given velocities impinge directly on each other; determine their velocities after impact.

THURSDAY, October 14.—MORNING, 10 to 1.

## GENERAL QUESTIONS.

*Examiner, Rev. R. MURPHY.*

1. What is the superficial area of a quadrangle of which the length is 23 yards  $8\frac{1}{4}$  feet, and the breadth is 11 yards  $5\frac{3}{4}$  feet?

2. At what date would the payment of £2000 be an equivalent for £1000 payable one year from this date, and another sum of £1000 payable the ensuing year, when money brings  $3\frac{1}{2}$  per cent. compound interest?

3. Assuming the truth of the binomial theorem when the index is a positive integer, show that it holds true when the index is fractional or negative.

4. What must be the numerical values of  $x, y, z$  in order that the equation

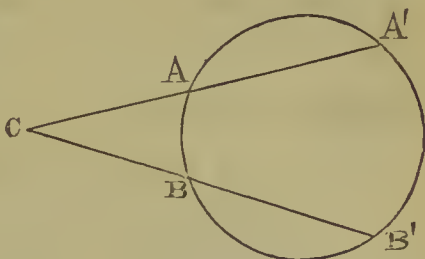
$(1 + 7a - 5b)x + (1 - 3a + 4b)y - (2 + 3a + \frac{6}{13}b)z + (1 + 4a) = 0$   
may become an identity (i. e. that it may always hold true, whatever values are assigned to the quantities  $a, b$ )?



5. Define Harmonic Progression; whence is its name deduced? Find a harmonic mean between  $\frac{1}{3}$  and  $\frac{1}{5}$ .

6. Find the least common multiple of the numbers 36, 100, 225.

7. Straight lines  $CA A'$ ,  $CB B'$  are drawn from any point without a circle, so as to intersect it,—prove that the angle  $C$  will be measured by half the difference of the arcs  $AB$ ,  $A'B'$ .



8. Find the conditions of equilibrium of a floating body. If the section of a block be an equilateral triangle, find the depth to which it will sink in a fluid  $n$  times its specific gravity, the vertex being out of the fluid.

9. Construct for the position of a mirror  $E$ . · B  
moveable round  $M$ , when to an eye  $E$ , the  
image of an object  $B$ , is exactly covered · A  
by that of another,  $A$ ; the points  $A$ ,  $B$ , |—————  
 $E$ ,  $M$  being given. M

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THURSDAY, October 14.—AFTERNOON, 3 to 6.

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## GENERAL QUESTIONS.

*Examiner, Mr. JERRARD.*

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1. Determine the locus of a point such that if straight lines be drawn from it to any number of given points in the same plane the sum of their squares shall be constant; and thence

find the locus of the vertex of the triangle of which the base and the sum of the squares of the sides are given.

2. Show how to find the distance between two inaccessible objects.

3. Prove that

$$\tan^{-1} x = x - \frac{x^3}{3} + \frac{x^5}{5} - \dots$$

and apply it in obtaining

$$\begin{aligned} \frac{\pi}{4} = 4 \left\{ \frac{1}{5} - \frac{1}{3} \left( \frac{1}{5} \right)^3 + \frac{1}{5} \left( \frac{1}{5} \right)^5 - \dots \right\} \\ - \left\{ \frac{1}{239} - \frac{1}{3} \left( \frac{1}{239} \right)^3 + \dots \right\}. \end{aligned}$$

4. Give the trigonometric expression for the factors of  $x^m \pm 1$ .

5. Determine, by means of the transformation of the co-ordinates, the curve represented by the equation

$$y^2 + 2xy - x^2 - 2y - 18x - 29 = 0.$$

6. In each of the five regular polyhedrons, find the expression for the inclination of two adjacent faces.

7. A bent lever with a weight attached to each extremity is moveable in a vertical plane about the angular point; find the position in which it will rest.

8. A weight descends vertically drawing another weight up an inclined plane by a string which passes over a pulley and is parallel to the plane; determine the circumstances of the motion.

## CHEMISTRY.

*Examiner, Professor DANIELL.*

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*FRIDAY, October 15.—MORNING, 10 to 1.*

1. Describe and explain the best methods of estimating the moisture of the atmosphere.
2. What would be the volume at  $65^{\circ}$  Fahr. of 100 cubic inches of air measured at  $32^{\circ}$  Fahr.?
3. What is meant by *double-elective affinity*? Explain with reference to an example.
4. What is the constitution of Water? and in what manner does it enter into secondary combination?
5. Describe and explain the process of the Vinous fermentation.

## NATURAL HISTORY.

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FRIDAY, October 15.—AFTERNOON, 3 to 6.

### BOTANY.

*Examiner*, Professor HENSLOW.

#### CHARACTERS OF THE PRINCIPAL NATURAL FAMILIES OF EUROPEAN PLANTS.

State the principal characters of the following Orders :

1. *Violaceæ*.
2. *Lythraceæ*.
3. *Caprifoliaceæ*.
4. *Coniferæ*.
5. *Gramineæ*.

Compare the following Orders, by showing in what respects their characters agree and disagree :

6. *Leguminosæ* with *Rosaceæ*.
7. *Umbelliferæ* with *Araliaceæ*.
8. *Amaryllideæ* with *Liliaceæ*.

To what Natural Orders do you refer the plants possessing the following characters ?

9. *Flores* hermaphroditi vel abortu unisexuales.

*Calyx* ovario connatus, limbo post anthesin sæpe aucto.

*Corolla* monopetala, tubulosa, disco epigyno inserta, 3—5 loba.

*Stamina* 1—5 corollæ lobis alterna, tubo prope basin inserta.

*Ovarium* uniloculare, loculis duobus abortivis, tertio uniovulato.

*Ovulum* anatropum pendulum.

*Stylus* simplex filiformis.

*Stigmata* 2—3 libera vel connata.

*Fructus* indehiscens, coriaceus vel membranaceus, calycis limbo sæpe papposo coronatus, 2—3 locularis, monospermus.

*Semen* inversum, exalbuminosum.

*Embryo* orthotropus, dicotyledoneus.

10. *Flores* hermaphroditi vel abortu unisexuales, regulares, singuli bracteolati.

*Perigonium* hexaphyllum; foliola scarioso-glumacea vel sub-petaloidea, persistentia.

*Stamina* 6 foliolis opposita, vel 3 ante tria exteriora sita.

*Ovarium* scssile, liberum, è carpellis tribus conflatum, triloculare vel uniloculare.

*Ovula* 3 basilaria, vel plurima e funiculis erecta, anatropa.

*Stylus* terminalis, simplex.

*Stigmata* 3 filiformia plerumque distincta.

*Capsula* 1—3 locularis, trivalvis.

*Semina* 3 vel plurima, erecta.

*Embryo* monocotyledoneus, in basi albuminis carnosius inclusus.

## ZOOLOGY.

*Examiner*, Dr. ROGET.

State the principles on which the Zoological Classification of Cuvier is founded; and point out the peculiarities which distinguish it from other systems.

## CLASSICS.

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TUESDAY, October 19.—MORNING, 10 to 1.

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### ENGLISH PROSE COMPOSITION.

*Examiner*, Rev. Dr. JERRARD.

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*Subject*.—The uses of Ancient and Modern History.

Ceterum ex aliis negotiis, quæ ingenio exerceantur, in primis magno usui est memoria rerum gestarum.—*Sallust. Bellum Jug. Cap. IV.*

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TUESDAY, October 19.—AFTERNOON, 3 to 6.

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### LATIN PROSE.

*Examiner*, Mr. BURCHAM.

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Translate into Latin Prose:

The life and faculties of man, at the best but short and limited, cannot be employed more rationally or laudably, than

in the search of knowledge ; and espeecially of that sort which relates to our duty, and conduces to our happiness. Whenever I perceive any glimmering of truth before me, I readily pursue and endcavour to trace it to its source ; without any reserve or eaution of pushing the discovery too far, or opening too great a glare of it to the public. I look upon the discevery of anything which is true, as a valuable aeqsition to society ; which cannot possibly hurt, or obstruct the good effect of any other truth whatsoever : for they all partake of one common essence, and neecessarily coincide with each other ; and, like the drops of rain, which fall separately into the river, mix themselves at once with the stream, and strengthen the general current.—*Conyers Middleton.*

Re-translate into Latin Prose :

Men of Ardea, my friends of old, of late my fellow-citizens, a relation established by your kindness, and formed by my fortune, let not any one of you imagine that I have come hither forgetting my situation. The present case and the common danger render it neccessary that every one should contribute to the public every kind of assistance in his power. And when shall I repay so great obligations as I owe you, if I am now remiss ? When can I be serviceable to you if not in war ? By my knowledge in that line I supported a character in my native country, and though never overcome by an enemy in war, I have been banished in peace by my ungrateful countrymen. To you, men of Ardea, fortune has presented an opportunity of making a recompense for all the valuable favours which the Roman people have formerly conferred upon you. How great these have been, ye yourselves remember ; nor need I, who know you to be grateful, remind you of them. At the same time you may acquire, for this your city, great military renown by acting against the common enemy. The nation, which is now advancing, in a disorderly march, is one to which nature has given minds and bodies of greater size than strength ; for which reason they bring to every contest more of terror than of real vigour. The disaster of Rome may serve as a proof of this ; they took



the city when every avenue lay open ; but still a small band in the citadel and capitol is able to resist them. Already tired of the protracted siege they retire and spread themselves over the face of the country. Gorged with food and greedy draughts of wine, when night comes on, they stretch themselves promiseuously, like brutes, near streams of water, without intrenchment and without either guards or advanced posts, using at present, in consequence of success, still less caution than usual. If you are determined to defend your walls, and not to suffer all this country to become a province of Gaul, take arms in a body at the first watch. Follow me, to kill, not to fight. If I do not deliver them into your hands, overpowered with sleep, to be slaughtered like cattle, I am content to meet the same issue of affairs at Ardea which I found at Rome.

WEDNESDAY, October 20.—MORNING, 10 to 1.

## GREEK.

*Examiner*, Rev. Dr. JERRARD.

Translate :

(A.) HOMER\*, ILIAD, Book V.

ἡ μὲν ἐποιχομένη χρυσάμπυκας ἔντυεν ἵππους 720  
 "Ἡρη, πρέσβα θεὰ, θυγάτηρ μέγαλοιο Κρόνιοιο.  
 "Ἡβη δ' ἀμφ' ὀχέεσσι θοῶς βάλε καμπύλα κύκλα  
 χάλκεα, ὀκτάκνημα, σιδηρέῳ ἄξονι ἀμφίς·  
 τῶν ἦτοι χρυσέῃ ἵτις ἄφθιτος, αὐτὰρ ὕπερθεν  
 χάλκε' ἐπίσσωτρα, προσαρηρότα, θαῦμα ἰδέσθαι·

\* Edit. Heyne.



πλήμναι δ' ἀργύρου εἰσὶ περιδρομοὶ ἀμφοτέρωθεν·  
 δίφρος δὲ χρυσεῖσι καὶ ἀργυρέοισιν ἱμάσιν  
 ἐντέταται· δοιαὶ δὲ περιδρομοὶ ἀντυγές εἰσι·  
 τοῦ δ' ἐξ ἀργύρεος ῥυμὸς πέλεν· αὐτὰρ ἐπ' ἄκρῳ  
 δῆσε χρύσειον καλὸν ζυγὸν, ἐν δὲ λέπαδνα 730  
 κάλ' ἔβαλε, χρύσει· ὑπὸ δὲ ζυγὸν ἤγαγεν Ἥρη  
 ἵππους ὠκύποδας, μεμαυῖ' ἔριδος καὶ αὐτῆς.

Αὐτὰρ Ἀθηναίη, κούρη Διὸς αἰγιόχοιο,  
 πέπλον μὲν κατέχευεν ἑάνον πατρὸς ἐπ' οὔδει,  
 ποικίλον, ὃν ῥ' αὐτὴ ποιήσατο καὶ κάμε χερσίν·  
 ἡ δὲ, χιτῶν' ἐνδύσα, Διὸς νεφεληγερέταο  
 τεύχεσιν ἐς πόλεμον θωρήσσετο δακρυόεντα,  
 ἀμφὶ δ' ἄρ' ὤμοισι βάλετ' αἰγίδα θυσσανόεσσαν,  
 δεινὴν, ἣν περὶ μὲν πάντη Φόβος ἐστεφάνωται·  
 ἐν δ' Ἔρις, ἐν δ' Ἀλκὴ, ἐν δὲ κρυόεσσα Ἴωκῆ· 740  
 ἐν δέ τε Γοργεῖη κεφαλὴ δεινοῖο πελώρου,  
 δεινὴ τε, σμερδνὴ τε, Διὸς τέρας αἰγιόχοιο.  
 κρατὶ δ' ἐπ' ἀμφίφαλον κυνέην θέτο τετραφάληρον,  
 χρυσεῖην, ἑκατὸν πόλεων πρυλέεσσ' ἀραρυῖαν.  
 ἐς δ' ὄχρεα φλόγεα ποσὶ βήσετο· λάζετο δ' ἔγχος  
 βριθὺ, μέγα, στιβαρόν, τῷ δάμνησι στίχας ἀνδρῶν  
 ἡρώων, τοῖσί τε κοτέσσεται ὀβριμοπάτρη.  
 Ἥρη δὲ μᾶστιγι θοῶς ἐπεμαίετ' ἄρ' ἵππους.  
 αὐτόμαται δὲ πύλαι μύκον Οὐρανοῦ, ἃς ἔχον Ὀφραι,  
 τῆς ἐπιτέτραπται μέγας Οὐρανὸς, Οὐλύμπός τε, 750  
 ἡμὲν ἀνακλῖναι πυκινὸν νέφος, ἡδ' ἐπιθεῖναι.

(B.) ÆSCHYLUS\*, PROM. VINCTUS.

ἦ μὴν ἔτι Ζεὺς, καίπερ αὐθάδῃ φρονῶν,  
 ἔσται ταπεινὸς, οἷον ἐξαρτύεται  
 γάμον γαμεῖν· ὃς αὐτὸν ἐκ τυραννίδος  
 θρόνων τ' αἰῶστον ἐκβαλεῖ· πατρὸς δὲ ἀρὰ 910  
 Κρόνου τότ' ἤδη παντελῶς κρανθήσεται,  
 ἣν ἐκπίπνων ἡρᾶτο δηναίων θρόνων.  
 τοιῶνδε μόχθων ἐκτροπὴν οὐδεὶς θεῶν  
 δύνατ' ἂν αὐτῷ πλὴν ἐμοῦ δεῖξαι σαφῶς.

ἐγὼ τὰδ' οἶδα χῶ τρόπῳ. πρὸς ταῦτα νῦν  
 θαρσῶν καθήσθω τοῖς πεδαρσίοις κτύποις  
 πιστὸς, τινάσσων τ' ἐν χεροῖν πύρπνουν βέλος.  
 οὐδὲν γὰρ αὐτῷ ταῦτ' ἐπαρκέσει τὸ μὴ οὐ  
 πεσεῖν ἀτίμως πτώματ' οὐκ ἀνασχετά·  
 τοῖον παλαιστὴν νῦν παρασκευάζεται 920  
 ἐπ' αὐτὸς αὐτῷ, δυσμαχώτατον τέρας·  
 ὃς δὴ κεραυνοῦ κρείσσον' εὐρήσει φλόγα,  
 βροντῆς θ' ὑπερβάλλοντα καρτερὸν κτύπον·  
 θαλασσίαν τε γῆς τινάκτειραν νόσον  
 τρίαῖναν, αἰχμὴν τὴν Ποσειδῶνος, σκεδᾷ.  
 πταίσας δὲ τῷδε πρὸς κακῷ μαθήσεται  
 ὅσον τό τ' ἄρχειν καὶ τὸ δουλεύειν δίχα.

## (C.) DEMOSTHENES\*, PHIL. II.

“Ὅταν ὦ ἄνδρες Ἀθηναῖοι λόγοι γίνωνται περὶ ὧν Φίλιππος  
 πράττει καὶ βιάζεται παρὰ τὴν εἰρήνην, αἰεὶ τοὺς ὑπὲρ ἡμῶν  
 λόγους καὶ δικαίους καὶ φιλανθρώπους ὁρῶ φαινομένους, καὶ  
 λέγειν μὲν ἅπαντας αἰεὶ τὰ δέοντα δοκοῦντας τοὺς κατηγοροῦν-  
 τας Φιλίππου, γιγνόμενον δ' οὐδὲν ὡς ἔπος εἰπεῖν τῶν δεόντων  
 οὐδ' ὧν ἔνεκα ταῦτ' ἀκούειν ἄξιον· ἀλλ' εἰς τοῦτο ἤδη προηγ-  
 μένα τυγχάνει πάντα τὰ πράγματα τῇ πόλει, ὥσθ' ὅσω τις ἂν  
 μᾶλλον καὶ φανερώτερον ἐξελέγχη Φίλιππον καὶ τὴν πρὸς ὑμᾶς  
 εἰρήνην παραβαίνοντα καὶ πᾶσι τοῖς Ἑλλήσιν ἐπιβουλεύοντα,  
 τοσούτῳ τὸ τί χρὴ ποιεῖν συμβουλεύσαι χαλεπώτερον εἶναι.  
 αἴτιον δὲ τούτων, ὅτι πάντας ὦ ἄνδρες Ἀθηναῖοι τοὺς πλεονεκ-  
 τεῖν ζητοῦντας ἔργῳ κωλύειν καὶ πράξεσιν, οὐχὶ λόγοις δέον  
 πρῶτον μὲν ἡμεῖς οἱ παριόντες τούτων μὲν ἀφέσταμεν, καὶ γρά-  
 φειν καὶ συμβουλεύειν διὰ τὴν πρὸς ὑμᾶς ἀπέχθειαν ὀκνοῦν-  
 τες, οἷα ποιεῖ δέ, ὡς δεινὰ καὶ χαλεπά, ταῦτα διεξερχόμεθα·  
 ἔπειθ' ὑμεῖς οἱ καθήμενοι, ὡς μὲν ἂν εἴποιτε δικαίους λόγους  
 καὶ λέγοντος ἄλλου συνείητε, ἄμεινον Φιλίππου παρεσκεύασθε,  
 ὡς δὲ κωλύσαιτ' ἂν ἐκείνον πράττειν ταῦτα ἐφ' ὧν ἐστὶ νῦν,  
 παντελῶς ἰργῶς ἔχετε. συμβαίνει δὴ πρᾶγμα ἀναγκαῖον, οἶμαι,  
 καὶ ἴσως εἰκόσ· ἐν οἷς ἑκάτεροι διατρίβετε καὶ περὶ ἃ σπουδά-  
 ζετε, ταῦτ' ἄμεινον ἑκατέροις ἔχει, ἐκείνῳ μὲν αἱ πράξεις, ὑμῖν

δ' οἱ λόγοι. εἰ μὲν οὖν καὶ νῦν λέγειν δικαιότερα ὑμῖν ἔξαρκεῖ, ῥάδιον, καὶ πόνος οὐδεὶς πρόσεστι τῷ πράγματι· εἰ δ' ὅπως τὰ παρόντ' ἐπανορθωθήσεται, δεῖ σκοπεῖν, καὶ μὴ προελθόντα ἔτι πορρῶτέρῳ λήσει πάντας ἡμᾶς, μηδ' ἐπιστήσεται μέγεθος δυνάμεως πρὸς ἣν οὐδ' ἀντᾶραι δυνησόμεθα, οὐχ ὁ αὐτὸς τρόπος ὅσπερ πρότερον τοῦ βουλευέσθαι, ἀλλὰ καὶ τοῖς λέγουσιν ἅπασι καὶ τοῖς ἀκούουσιν ὑμῖν τὰ βέλτιστα καὶ τὰ σώσοντα τῶν ῥάστων καὶ τῶν ἡδίστων προαιρετέον.

1. (A.) Give short explanatory notes on this extract. What portions of it strike you as the most highly poetical? Of what passage in Milton do the last three verses remind you?

2. (B.) Do you prefer the reading τὸ μὴ οὐ to τὸ μὴ in line 918? If so, why? In which of the verses of this extract does “the sound” appear to you to be most remarkably “an echo to the sense?”

3. (C.) What was the state of the affairs of the Athenians, as regarded Philip, at the time that the 2nd Philippic was delivered? What effect had it upon them?

4. Translate the following short sentences into Greek: “Not having found him they did not return.” “If they had found him they would have returned.” “If thou <sup>be</sup> art } the king of Macedonia, command thy soldiers not to enter the city.” What mood of the verb substantive ought to be employed in the last sentence in Greek, Latin, and English respectively? State the reasons.

5. Give Herodotus's account of the various kinds of embalming practised by the Egyptians. Has this account been confirmed by modern observations? From what sources did he derive his information respecting the Egyptians? To what other Classic Authors are we indebted for a knowledge of the affairs of that people?

WEDNESDAY, October 20.—AFTERNOON, 3 to 6.

## GREEK.

Examiner, Mr. BURCHAM.

Translate :

(A.) HERODOTUS\*, Book II. Chap. LXVIII.

Ἐὸν δὲ τετράπουν, χερσαῖον καὶ λιμναῖόν ἐστι· τίκει μὲν γὰρ ὡὰ ἐν γῇ, καὶ ἐκλέπει· καὶ τὸ πολλὸν τῆς ἡμέρης διατρίβει ἐν τῷ ξηρῷ, τὴν δὲ νύκτα πᾶσαν ἐν τῷ ποταμῷ· θερμότερον γὰρ δὴ ἐστὶ τὸ ὕδωρ τῆς τε αἰθρίας καὶ τῆς δρόσου. πάντων δὲ τῶν ἡμεῖς ἴδμεν θνητῶν, τοῦτο ἐξ ἐλαχίστου μέγιστον γίνεται. τὰ μὲν γὰρ ὡὰ, χηνέων οὐ πολλῷ μέζονα τίκει· καὶ ὁ νεοσσὸς κατὰ λόγον τοῦ ὡοῦ γίνεται· αὐξανόμενος δὲ, γίνεται καὶ ἐς ἐπτακαίδεκα πήχεας, καὶ μέζων ἔτι. ἔχει δὲ ὀφθαλμοὺς μὲν ὕδρ, ὀδόντας δὲ μεγάλους καὶ χαυλιόδοντας, κατὰ λόγον τοῦ σώματος. γλῶσσαν δὲ μῦνον θηρίων οὐκ ἔφυσε. οὐδὲ τὴν κάτω κινεῖ γνάθον· ἀλλὰ καὶ τοῦτο μῦνον θηρίων τὴν ἄνω γνάθον προσάγει τῇ κάτω. ἔχει δὲ καὶ ὄνυχας καρτεροὺς, καὶ δέρμα λεπιδωτὸν ἄρρηκτον ἐπὶ τοῦ νώτου. τυφλὸν δὲ ἐν ὕδατι, ἐν δὲ τῇ αἰθρίῃ ὀξυδερκέστατον. ἅτε δὴ ὦν ἐν ὕδατι δίαιταν ποιεύμενον, τὸ στόμα ἔνδοθεν φορέει πᾶν μεστὸν βδελλέων. τὰ μὲν δὲ ἄλλα ὄρνεα καὶ θηρία φεύγει μιν· ὁ δὲ τροχῖλος εἰρηναῖόν οἱ ἐστί, ἅτε ὠφελεομένῳ πρὸς αὐτοῦ· ἐπεὰν γὰρ ἐς τὴν γῆν ἐκβῇ ἐκ τοῦ ὕδατος ὁ κροκόδειλος, καὶ ἔπειτα χάνῃ, (ἐώθεε γὰρ τοῦτο ὡς ἐπίπαν ποιεῖν πρὸς τὸν ζέφυρον,) ἐνθαῦτα ὁ τροχῖλος ἐσδύνων ἐς τὸ στόμα αὐτοῦ, καταπίνει τὰς βδέλλας· ὁ δὲ, ὠφελεύμενος ἥδεται, καὶ οὐδὲν σίνεται τὸν τροχῖλον.

\* Edit. Bachr.

## (B.) THUCYDIDES\*, Book I. Chap. XC.

Ἡξίουں τε αὐτοὺς μὴ τειχίζειν, ἀλλὰ καὶ τῶν ἔξω Πελοποννήσου μάλλον, ὅσοις εἰστῇκει, ξυγκαθελεῖν μετὰ σφῶν τοὺς περιβόλους, τὸ μὲν βουλόμενον καὶ ὑποπτον τῆς γνώμης οὐ δηλοῦντες ἐς τοὺς Ἀθηναίους, ὡς δὲ τοῦ βαρβάρου, εἰ αὐθις ἐπέλθοι, οὐκ ἂν ἔχοντος ἀπὸ ἐχυροῦ πόθεν, ὥσπερ νῦν ἐκ τῶν Θηβῶν, ὀρμᾶσθαι τὴν τε Πελοπόννησον πᾶσιν ἔφασαν ἱκανὴν εἶναι ἀναχώρησίν τε καὶ ἀφορμήν. οἱ δ' Ἀθηναῖοι Θεμιστοκλέους γνώμῃ τοὺς μὲν Λακεδαιμονίους ταῦτ' εἰπόντας, ἀποκρινάμενοι ὅτι πέμψουσιν ὡς αὐτοὺς πρέσβεις περὶ ὧν λέγουσιν, εὐθὺς ἀπήλλαξαν· ἑαυτὸν δ' ἐκέλευεν ἀποστέλλειν ὡς τάχιστα ὁ Θεμιστοκλῆς ἐς τὴν Λακεδαίμονα, ἄλλους δὲ πρὸς ἑαυτῷ ἐλομένους πρέσβεις μὴ εὐθὺς ἐκπέμπειν, ἀλλ' ἐπισχεῖν μέχρι τοσούτου, ἕως ἂν τὸ τεῖχος ἱκανὸν ἄρῳσιν ὥστε ἀπομάχεσθαι ἐκ τοῦ ἀναγκαιοτάτου ὕψους· τειχίζειν δὲ πάντας πανδημεὶ τοὺς ἐν τῇ πόλει, καὶ αὐτοὺς καὶ γυναῖκας καὶ παῖδας, φειδομένους μήτε ἰδίου μήτε δημοσίου οἰκοδομήματος, ὅθεν τις ὠφέλεια ἔσται ἐς τὸ ἔργον, ἀλλὰ καθαιροῦντας πάντα. καὶ ὁ μὲν ταῦτα διδάξας, καὶ ὑπειπὼν τᾶλλα ὅτι αὐτὸς τάκει πράξει, ὄχρετο. καὶ ἐς τὴν Λακεδαίμονα ἐλθὼν οὐ προσήει πρὸς τὰς ἀρχάς, ἀλλὰ διῆγε καὶ προὔφασίζετο. καὶ ὁπότε τις αὐτὸν ἔροιτο τῶν ἐν τέλει ὄντων ὅ τι οὐκ ἐπέρχεται ἐπὶ τὸ κοινόν, ἔφη τοὺς ξυμπρέσβεις ἀναμένειν, ἀσχολίας δὲ τινος οὔσης αὐτοὺς ὑπολειφθῆναι, προσδέχεσθαι μέντοι ἐν τάχει ἥξειν, καὶ θαυμάζειν ὡς οὐπω πάρεισιν.

## (C.) EURIPIDES†, MEDEA, 216—260.

ΜΗ. Κορίνθιαι γυναῖκες, ἐξῆλθον δόμων,  
μή μοί τι μέμψησθ'. οἶδα γὰρ πολλοὺς βροτῶν  
σεμνοὺς γεγῶτας, τοὺς μὲν ὀμμάτων ἅπο,  
τοὺς δ' ἐν θυραίοις· οἱ δ' ἀφ' ἡσύχου ποδὸς  
δύσκειαν ἐκτῆσαντο καὶ ῥαθυμίαν.  
δίκη γὰρ οὐκ ἔνεστιν ὀφθαλμοῖς βροτῶν,  
ὅστις, πρὶν ἀνδρὸς σπλάγχχνον ἐκμαθεῖν σαφῶς,  
στρυγεῖ δεδορκῶς, οὐδὲν ἠδικημένος.

\* Edit. Bekker.

† Edit. Porson.



χρὴ δὲ ξένον μὲν κάρτα προσχωρεῖν πόλει,  
 οὐδ' ἀσπὸν ἦνεσ', ὅστις αὐθάδης γεγώς,  
 πικρὸς πολίταις ἐστὶν ἀμαθίας ὑπο.  
 ἐμοὶ δ' ἄελπτον πρᾶγμα προσπεσὸν τόδε  
 ψυχὴν διέφθαρκ'. οἴχομαι δὲ, καὶ βίου  
 χάριν μεθεῖσα κατθανεῖν χρήζω, φίλαι.  
 ἐν ᾧ γὰρ ἦν μοι πάντα, γινώσκεις καλῶς,  
 κάκιστος ἀνδρῶν ἐκβέβηχ' οὐμὸς πόσις.  
 πάντων δ' ὅσ' ἔστ' ἔμψυχα, καὶ γνώμην ἔχει,  
 γυναῖκες ἐσμέν ἀθλιώτατον φυτόν.  
 ἄς πρῶτα μὲν δεῖ χρημάτων ὑπερβολῇ  
 πόσιν πρίασθαι, δεσπότην τε σώματος  
 λαβεῖν· κακοῦ γὰρ τοῦτ' ἔτ' ἄλγιον κακόν.  
 καὶ τῷδ' ἀγῶν μέγιστος, ἢ κακὸν λαβεῖν,  
 ἢ χρηστόν· οὐ γὰρ εὐκλεεῖς ἀπαλλαγαὶ  
 γυναιξίν, οὐδ' οἷόν τ' ἀνήνασθαι πόσιν.  
 εἰς καινὰ δ' ἦθη καὶ νόμους ἀφιγμένην,  
 δεῖ μάντιν εἶναι, μὴ μαθοῦσαν οἰκοθεν,  
 ὅτῳ μάλιστα χρήσεται ξυνευνέτη.  
 καὶ μὲν τὰδ' ἡμῖν ἐκπονουμέναισιν εὖ  
 πόσις ξυνοικῇ, μὴ βία φέρων ζυγόν,  
 ζηλωτὸς αἰών· εἰ δὲ μὴ, θανεῖν χρεών.  
 ἀνὴρ δ', ὅταν τοῖς ἔνδον ἄχθεται ξυνών,  
 ἔξω μολὼν ἔπαυσε καρδίας ἄσσην,  
 ἢ πρὸς φίλον τιν', ἢ πρὸς ἡλικας τραπεῖς·  
 ἡμῖν δ' ἀνάγκη πρὸς μίαν ψυχὴν βλέπειν.  
 λέγουσι δ' ἡμᾶς, ὡς ἀκίνδυνον βίον  
 ζῶμεν κατ' οἴκους, οἱ δὲ μάρνανται δορί·  
 κακῶς φρονούντες, ὡς τρεῖς ἂν παρ' ἀσπίδα  
 στήναι θέλοιμ' ἂν μάλλον, ἢ τεκεῖν ἄπαξ.  
 ἀλλ' οὐ γὰρ αὐτὸς πρὸς σὲ καμ' ἦκει λόγος·  
 σοὶ μὲν πόλις θ' ἦδ' ἐστὶ καὶ πατὴρ δόμοι,  
 βίου τ' ὄνησις, καὶ φίλων κοινωνία·  
 ἐγὼ δ' ἔρημος, ἄπολις οὖσ', ὑβρίζομαι  
 πρὸς ἀνδρὸς, ἐκ γῆς βαρβάρου λελησμένη,  
 οὐ μητέρ', οὐκ ἀδελφόν, οὐχὶ συγγενή,  
 μεθορμίσασθαι τῇσδ' ἔχουσα συμφορᾶς.

1. For εἰστήκει in extract (B.) some editions have ξυνεισ-  
τῆκει. Which do you consider the better reading, and why? Put into Latin the words ὁπότε τις αὐτὸν ἔροιτο. Explain the force of ὅ τι, and point out accurately the difference of meaning between ὅ τι οὐκ ἐπέρχεται and διότι οὐκ ἐπ.

2. Quote any passages from Aristophanes in which Euripides is ridiculed. Enumerate the extant plays of the former in their order of succession. Give the plot of the Phœnissæ of Euripides. In what respect, as regards the family of Œdipus, do he and Sophocles disagree?

3. Mention the principal extant dialogues of Plato. How do he and Xenophon differ in reference to Socrates? Give a short account of the chief political changes which took place in Athens, Sparta and Thebes, between the end of the Peloponnesian war and the battle of Mantinea.

4. Mention the most distinguished men in Athens and Sparta during the Peloponnesian war. In what year of that war did the expedition against Pylos take place? Describe the situation of the island Cythera, and give its modern name.

THURSDAY, October 21.—MORNING, 10 to 1.

## LATIN.

*Examiner*, Rev. Dr. JERRARD.

Translate :

(A.) CICERO\*, PRO ARCHIA POETA, Chap. VII.

Quaeret quispiam : " Quid ? illi ipsi summi viri, quorum

\* Edit. Orellii.



virtutes literis proditae sunt, istane doctrina, quam tu laudibus effers, cruditi fuerunt?" Difficile est hoc de omnibus confirmare; sed tamen est certum, quid respondeam. Ego multos homines excellenti animo ac virtute fuisse sine doctrina, et naturae ipsius habitu prope divino, per se ipsos et moderatos et graves exstitisse fateor. Etiam illud adiungo, saepius ad laudem atque virtutem naturam sine doctrina, quam sine natura valuisse doctrinam. Atque idem ego contendo, quum ad naturam eximiam atque illustrem accesserit ratio quaedam conformatioque doctrinae: tum illud nescio quid praeclarum ac singulare solere exsistere. Ex hoc esse hunc numero, quem patres nostri viderunt, divinum hominem, Africanum: ex hoc C. Laelium, L. Furium, moderatissimos homines et continentissimos: ex hoc fortissimum virum, et illis temporibus doctissimum, M. Catonem illum senem: qui profecto, si nihil ad percipiendam colendamque virtutem literis adjuvarentur, nunquam se ad earum studium contulissent. Quod si non hic tantus fructus ostenderetur, et si ex his studiis delectatio sola peteretur: tamen, ut opinor, hanc animi adversionem humanissimam ac liberalissimam iudicaretis. Nam ceterae neque temporum sunt, neque aetatum omnium, neque locorum: haec studia adolescentiam alunt, senectutem oblectant, secundas res ornant, adversis perfugium ac solatium praebent, delectant domi, non impediunt foris, pernoctant nobiscum, peregrinantur, rusticantur.

(B.) VIRGIL\*, GEORGICS, Book IV.

Ac veluti, lentis Cyclopes fulmina massis  
 Quum properant, alii taurinis foliis auras  
 Accipiunt redduntque, alii stridentia tingunt  
 Æra lacu; gemit impositis incudibus Ætæna;  
 Illi inter sese magna vi brachia tollunt  
 In numerum, versantque tenaci forcipe ferrum:  
 Non aliter, si parva licet componere magnis,  
 Cecropias innatus apes amor urget habendi,  
 Munere quamque suo. Grandævis oppida curæ,

\* Edit. Heyne.

Et munire favos, et dædala fingere tecta :  
 At fessæ multa referunt se nocte minores,  
 Crura thymo plenæ : paseuntur et arbuta passim,  
 Et glaucas salices, casiamque, erocumque rubentem,  
 Et pinguem tiliam, et ferrugineos hyacinthos.  
 Omnibus una quies operum, labor omnibus unus.  
 Mane ruunt portis ; nusquam mora : rursus easdem  
 Vesper ubi e pastu tandem deeedere campis  
 Admonuit, tum tecta petunt, tum corpora curant ;  
 Fit sonitus, mussantque oras et limina cireum.  
 Post, ubi jam thalamis se composuere, siletur  
 In noctem, fessosque sopor suus oocupat artus.  
 Nec vero a stabulis pluvia impendente recedunt  
 Longius, aut credunt cœlo adventantibus Euris ;  
 Sed cireum tutæ sub mœnibus urbis aquantur,  
 Exeursusque breves tentant, et sæpe lapillos,  
 Ut eymbæ instabiles fluctu jaetante suburram,  
 Tollunt ; his sese per inania nubila librant.

(C.) TACITUS\*, AGRICOLA, Chap. XLV.

Non vidit Agricola obsessam euriam et clausum armis senatum et eadem strage tot consularium caedes, tot nobilissimarum feminarum exsilia et fugas. una adhuc victoria Carus Metius censebatur, et intra Albanam arcem sententia Messalini strepebat, et Massa Bebius iam tum reus erat. Mox nostræ duxere Helvidium in carcerem manus ; nos Maurici Rusticique visus, nos innocenti sanguine Senecio perfudit. Nero tamen subtraxit oculos, iussitque scelera, non spectavit : praecepua sub Domitiano miseriarum pars erat, videre et aspici : cum suspiria nostra subseriberentur, cum denotandis tot hominum palloribus sufficeret saevus ille vultus et rubor, a quo se contra pudorem muniebat. Tu vero felix, Agricola, non vitae tantum claritate, sed etiam opportunitate mortis, ut perhibent, qui interfuerunt novissimis sermonibus tuis, constans et libens fatum excepisti, tanquam pro virili portione innocentiam principi donares. Sed mihi

\* Edit. Walther.

filiaeque eius, praeter acerbitatem parentis erepti, auget maestitiam, quod adsidere valetudini, fovere deficientem, satiari vultu, complexu non contigit. excepissemus certe mandata vocesque, quas penitus animo figeremus. noster hic dolor, nostrum vulnus : nobis tam longae absentiae conditione ante quadriennium amissus est. Omnia sine dubio, optime parentum, adsidente amantissima uxore superfuere honori tuo : paucioribus tamen laerimis compositus es, et novissima in luce desideravere aliquid oculi tui.

1. (A.) What passage of Horace in praise of learning is suggested by this extract? What were the principal events in the life of Africanus and in that of Cato Major?

2. (A.) Give the original signification of 'ratio,' and thence deduce its secondary meanings ; illustrating each of them by the corresponding term in Greek. What do you regard as the origin of *deponent* verbs in Latin ; and how do you explain the fact that several of them govern the ablative case?

3. (C.) Explain the chief historical allusions in this passage. When did Agricola arrive in Britain? What was the general character of his administration ; and how far was the dominion of the Romans extended by him?

4. Give Tacitus's account of the language, manners, and religion of the Britons ; also, of the natural productions of the island. Who were the Silures and the Brigantes?

5. What do you consider as the most probable account of the origin of the Latin language? Support your opinion by proofs.

THURSDAY, October 21.—AFTERNOON, 3 to 6.

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LATIN.

*Examiner, Mr. BURCHAM.*

---

Translate :

(A.) LIVY\*, Book XXI. Chap. XLVII.

Hoc primum cum Hannibale prælium fuit; quo facile apparuit, et equitatu meliorem Pœnum esse, et ob id campos patentcs, quales sunt inter Padum Alpesque, bello gerendo Romanis aptos non esse. Itaque proxima nocte, jussis militibus vasa silentio conligere, castra ab Ticino mota, festinaturnque ad Padum est; ut ratibus, quibus junxerat flumen, nondum resolutis, sine tumultu atque insectatione hostis, copias trajiceret. Prius Placentiam pervenere, quam satis sciret Hannibal ab Ticino profectos: tamen ad sexcentos moratorum in citeriore ripa, segniter ratem solventes, cepit. transire non potuit pontem, ut extrema resoluta erant, tota rate in secundam aquam labente. Cœlius auctor est, Magonem cum equitatu et Hispanis peditibus flumen extemplo transnasse; ipsum Hannibalem per superiora Padi vada exercitum traduxisse, elephantis in ordinem ad sustinendum inpetum fluminis obpositis. Ea peritis amnis ejus vix fidem fecerint. nam neque equites, armis equisque salvis, tantam vim fluminis superasse verisimile est, ut jam Hispanos omnes inflati transvexerint utres, et multorum dierum circuitu Padi vada petenda fuerant, qua exercitus gravis impedimentis traduci posset. Potiores apud me auctores sunt, qui biduo vix locum rate jungendo flumini inventum tradunt; ea cum

\* Edit. Ernesti.

Magone equites Hispanorum expeditos præmissos. dum Hannibal, circa flumen legationibus Gallorum audiendis moratus, trajicit gravius peditum agmen, interim Mago equitesque ab transitu fluminis diei unius itinere Placentiam ad hostes contendunt. Hannibal paucis post diebus sex millia a Placentia castra communivit, et postero die, in conspectu hostium acie directa, potestatem pugnæ fecit.

(B.)    HORACE\*, ODES, Book II, Ode IX.

Non semper imbres nubibus hispidos  
Manant in agros; aut mare Caspium  
Vexant inaequales procellae  
Usque; nec Armeniis in oris,

Amice Valgi, stat glacies iners  
Menses per omnes; aut Aquilonibus  
Querceta Gargani laborant,  
Et foliis viduantur orni.

Tu semper urges flebilibus modis  
Mysten ademtum; nec tibi vespero  
Surgente decedunt amores,  
Nec rapidum fugiente Solem.

At non ter aevo functus amabilem  
Ploravit omnes Antiochum senex  
Annos; nec impubem parentes  
Troïlon, aut Phrygiae sorores

Flevare semper. Desine mollium  
Tandem querelarum; et potius nova  
Cantemus Augusti tropaea  
Caesaris, et rigidum Niphaten;

Medumque flumen, gentibus additum  
Victis, minores volvere vortices;  
Intraque praescriptum Gelonos  
Exiguus equitare campis.

\* Edit. Anthon.



## (C.) HORACE\*, EPISTLES, Book I. Ep. III. 9.

Quid Titius, Romana brevi venturus in ora  
 Pindarici fontis qui non expalluit haustus,  
 Fastidire lacus et rivos ausus apertos?  
 Ut valet? ut meminit nostri? fidibusne Latinis  
 Thebanos aptare modos studet, auspice Musa?  
 An tragica desaevit et ampullatur in arte?  
 Quid mihi Celsus agit? monitus multumque monendus,  
 Privatas ut quaerat opes, et tangere vitet  
 Scripta, Palatinus quaecunque recepit Apollo;  
 Ne, si forte suas repetitum venerit olim  
 Grex avium plumas, moveat cornicula risum  
 Furtivis nudata coloribus. Ipse quid audes?  
 Quae circumvolitas agilis thyma? non tibi parvum  
 Ingenium, non incultum est et turpiter hirtum.  
 Seu linguam causis acuis, seu civica jura  
 Respondere paras, seu condis amabile carmen:  
 Prima ferēs ederae victricis praemia. Quod si  
 Frigida curarum fomenta relinquere posses,  
 Quo te coelestis sapientia duceret, ires.  
 Hoc opus, hoc studium parvi properemus et ampli,  
 Si patriae volumus, si nobis vivere cari.  
 Debes hoc etiam rescribere, si tibi curae,  
 Quantae conveniat, Munatius; an male sarta  
 Gratia nequidquam coit et rescinditur? At, vos  
 Seu calidus sanguis seu rerum inscitia vexat  
 Indomita cervice feros, ubicunque locorum  
 Vivitis, indigni fratrum rumpere foedus,  
 Pascitur in vestrum reditum votiva juvenca.

1. What parts of the History of Livy have been lost? Why is it probable that the whole of it was extant as late as the 12th century? To whom, and for what reasons, are the epitomes of the books of Livy ascribed?

2. In what year, and in whose consulship, did the first Punic war commence? How long did it last? Mention the

principal events in it. Trace Hannibal's march from Saguntum to the Trebia, and give the modern names of Agrigentum, Tarentum, Trebia, Cumæ and Zama.

3. Mention the principal Roman Satirists from Lucilius to Juvenal. Explain the difference between the Roman Satire and the Greek Satyrical Drama. Give the divisions of the Roman As, and explain—"hæres ex asse—hæres ex dodrante—fœnus ex quadrante factum est bessibus."

4. What is the force of the participle in *rus* with a perfect infinitive? Translate accurately, "I understand that he would have written." What is the difference in meaning between the perfect and imperfect subjunctive, and between "*Socrates solitus est dicere*" and "*Socrates solebat dicere*"?



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